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42. (New) The method of claim 1 wherein said transgene comprises a signal transduction domain.
43. (New) The method of claim 1 wherein said transgene is a transcription factor.

Remarks

Applicants respectfully request entry of the foregoing amendments, adding claims 28-43.

Support for claim 28 is found in Examples 3, which employs the plant *Petunia integrifolia*.

Support for claim 29 is found in Example 6, which employs *Rosa hybrida*.

Support for claim 30 is inherent in the term transgene. It would be appreciate by one of ordinary skill in the art that the disclosure of electroporating a transgene would encompass introducing a heterologous nucleic acid encoding a protein to express a new output trait.

Support for claim 31 may be found throughout the Specification, for example at page 7, lines 3-4 where it is stated that multiple genes may be co-transfected. The specification further teaches at page 13, lines 1-2, for example that in some embodiments transgenic plants are generated which do not have selectable markers.

Support for claims 32-33 may be found, for example, in the specification at page 6, lines 22-23 through page 7, lines 1-2 wherein it is taught that marker genes may be on separate molecules and has the advantage of readily obtaining marker-free transgenic plants. On page 13, lines 1-2 marker-free plants are described as a preferred embodiment. Thus, it is evident that the marker genes may be on the same or different nucleic acid molecules.

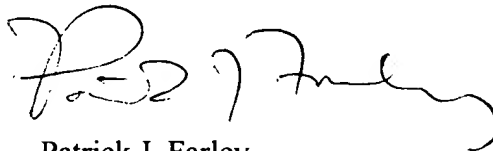
Support for claim 34 may be found for example at page 11, lines 5-12.

Support for claim 35 and 39 may be found in Example 2, wherein CONSTANS (CO) and GAI are used to transform chrysanthemum explants. Support for claims 36 and 39 may

be found in the specification at page 22, lines 13-16, wherein it is stated that the CO gene controls flowering time (citing Putteril, J. et al. (1995) Cell 80:847) and that the GAI gene controls plant height (citing Peng et al. (1999) Nature 400:261). Peng et al., describe GAI as a gene encoding "gibberellin signalling protein" (see page 258, last paragraph of Peng et al.) "containing feature that are characteristic of transcription factors" (page 257, second paragraph) that contains an SH2-like 'signal-transduction' domain, thus providing support for claim 40. The properties of SH2 domains are described in Peng et al. in the first paragraph of page 259, thus providing support for claim 41. Putteril et al., describe CONSTANS as a GATA1 transcription factor that contains zinc-finger domains characteristic of many transcription factors (see first paragraph of Discussion, page 853 in Putteril et al.), thus providing support for claims 37, 38, 42 and 43.

Applicants earnestly submit that no new matter is added. Applicants request entry of the additional claims and an early favorable action on the merits.

Respectfully submitted,



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Date: July 22, 2002

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Version with Markings to Show Changes Made**In the Specification**

On page 2, please replace the first full paragraph with the following:

Another method involves immobilization of DNA on silicon fibers. The fibers are then vortexed in the presences of plant cells. The resulting mechanical disruption allows the fibers to pierce the cells and deposit DNA into the cells. See, e.g., US Patent [5,3030,523] 5,303,523.

In the Claims

Please add the following new claims 28-43:

28. (New) The method of claim 1 wherein said plant is a plant of the genus *Petunia*.
29. (New) The method of claim 1 wherein said plant is a plant of the genus *Rosa*.
30. (New) The method of Claim 6 wherein said transgenes are other than a selectable marker.
31. (New) The method of Claim 6 wherein said transgenes are electroporated along with a nucleic acid encoding a selectable marker.
32. (New) The method of claim 31 wherein said selectable marker and said transgene are encoded on a single nucleic acid molecule.
33. (New) The method of claim 31 wherein said selectable marker and said transgene are encoded on separate nucleic acid molecules.
34. (New) The method of claim 31 wherein said selectable marker is NPTII.
35. (New) The method of claim 1 wherein said transgene is the CONSTANS gene.
36. (New) The method of claim 1 wherein said transgene modifies the flowering response of a plant.

37. (New) The method of claim 1 wherein said transgene is a member of the GATA1 family of transcription factors.
38. (New) The method of claim 1 wherein said transgene is zinc-finger containing transcription factor.
39. (New) The method of claim 1 wherein said transgene is the GAI gene.
40. (New) The method of claim 1 wherein said transgene is a gibberellin signaling protein.
41. (New) The method of claim 1 wherein said transgene is a transcription factor comprising an SH2-like signal transduction domain.
42. (New) The method of claim 1 wherein said transgene comprises a signal transduction domain.
43. (New) The method of claim 1 wherein said transgene is a transcription factor.

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PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Michael S. Dobres, Aidyn Mouradov and
Hong Zhang

Serial No.: 09/911,588

Group Art Unit: Not yet assigned

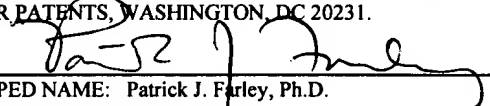
Filing Date: July 24, 2001

Examiner: Not yet assigned

For: Transformation of Plants by Electroporation of Cultured Explants

DATE OF DEPOSIT: July 22, 2002

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Sir:

REPLY TRANSMITTAL LETTER

Transmitted herewith for filing in the above-identified patent application is:

- ☒ A Preliminary Amendment.
- ☐ An Amendment Responsive to the Office Action Dated _____.
- ☐ An Amendment Supplemental to the Paper filed _____.
- ☐ Other: _____.

- ☒ Applicant(s) has previously claimed small entity status under 37 CFR §1.27.
- ☐ Applicant(s) by its/their undersigned attorney, claims small entity status under 37 CFR §1.27 as:
- ☐ an Independent Inventor
 - ☐ a Small Business Concern
 - ☐ a Nonprofit Organization
- ☐ This application is no longer entitled to small entity status. It is requested that this be noted in the files of the Patent and Trademark Office.
- ☐ Substitute Pages _____ of the Specification are enclosed.
- ☐ An Abstract is enclosed.
- ☐ _____ Sheets of Proposed Corrected Drawings are enclosed.
- ☐ A Certified Copy of each of the following applications: _____
_____ is enclosed.
- ☐ An Associate Power of Attorney is enclosed.
- ☐ Information Disclosure Statement.
- ☐ Attached Form 1449.
 - ☐ A copy of each reference as listed on the attached Form PTO-1449 is enclosed herewith.
- ☐ Appended Material as follows: _____.
- ☐ Other Material as follows: _____.

FEE CALCULATION

☐ No Additional Fee is Due.

				SMALL ENTITY		NOT SMALL ENTITY	
	REMAINING AFTER AMENDMENT	HIGHEST PAID FOR	EXTRA	RATE	FEE	RATE	FEE
TOTAL CLAIMS	128	112 (20 MINIMUM)	16	\$9 EACH	\$144	\$18 EACH	\$
INDEP. CLAIMS	3	3 (3 MINIMUM)	0	\$42 EACH	\$ 0	\$84 EACH	\$
FIRST PRESENTATION OF MULTIPLE DEPENDENT				\$140	\$	\$280	\$
<input type="checkbox"/> ONE MONTH EXTENSION OF TIME				\$55	\$	\$110	\$
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<input type="checkbox"/> THREE MONTH EXTENSION OF TIME				\$460	\$	\$920	\$
<input type="checkbox"/> FOUR MONTH EXTENSION OF TIME				\$720	\$	\$1440	\$
<input type="checkbox"/> FIVE MONTH EXTENSION OF TIME				\$980	\$	\$1960	\$
<input type="checkbox"/> LESS ANY EXTENSION FEE ALREADY PAID				minus	(\$)	minus	(\$)
<input type="checkbox"/> TERMINAL DISCLAIMER				\$55	\$	\$110	\$
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TOTAL FEE DUE					\$144.00		\$

☒ A Check is Enclosed in the Foregoing Amount Due.

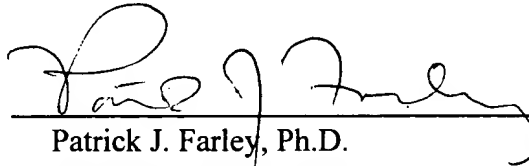
☐ Petition is hereby made under 37 C.F.R. 1.136(a) to extend the time for response to the Office Action of @@ to and through @@ comprising an extension of the shortened statutory period of @@ month(s).

☒ The Commissioner is hereby requested to grant an extension of time for the appropriate length of time, should one be necessary, in connection with this filing or any future filing submitted to the U.S. Patent and Trademark Office in the above-identified application during the pendency of this application. The Commissioner is further authorized to charge any fees related to any such extension of time to deposit account 23-3050. This sheet is provided in duplicate.

- ☒ The Commissioner is authorized to charge payment of the following fees and to refund any overpayment associated with this communication or during the pendency of this application to deposit account 23-3050. This sheet is provided in duplicate.
- ☐ The Foregoing Amount Due for Filing this Paper.
- ☒ Any additional filing fees required, including fees for the presentation of extra claims under 37 C.F.R. 1.16.
- ☒ Any additional patent application processing fees under 37 C.F.R. 1.17 or 1.20(d).

SHOULD ANY DEFICIENCIES APPEAR with respect to this application, including deficiencies in payment of fees, missing parts of the application or otherwise, the United States Patent and Trademark Office is respectfully requested to promptly notify the undersigned.

Date: July 22, 2002


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